

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 08-191357

(43)Date of publication of application : 23.07.1996

(51)Int.Cl.

H04M 15/00

(21)Application number : 07-243523

(71)Applicant : AT &amp; T CORP

(22)Date of filing : 22.09.1995

(72)Inventor : SMITH DAVID B

(30)Priority

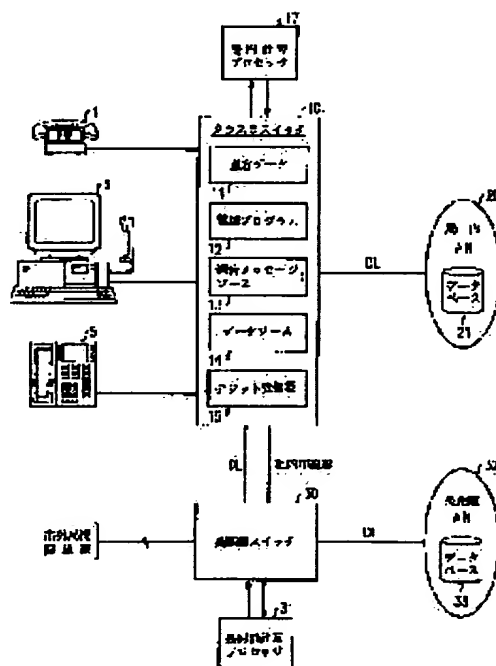
Priority number : 94 311638 Priority date : 23.09.1994 Priority country : US

## (54) CALL CHARGE CONTROL AND NOTIFICATION

(57)Abstract:

PROBLEM TO BE SOLVED: To realize the cell charge control and notification method on a telecommunication call by dialing an access number of a specific function in succession to a call charge display acceptable of payment before a specific call.

SOLUTION: A limit is placed on charges to be incurred on a telecommunication call. Normally, this limit is specified by the caller. The telecommunications network maintains a running tally of the charges being incurred and notifies the caller when the charges approach the limit. At that time, the caller may specify a new limit, simply disconnect, or be automatically disconnected when the limit is reached. Advantageously, callers can limit the charges on a particular call without having to be aware of the exact charging parameters for that call.



## LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of]

REA/ A A PV000178  
CITED BY APPLICANT

rejection]

[Kind of final disposal of application other than  
the examiner's decision of rejection or  
application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's  
decision of rejection]

[Date of requesting appeal against examiner's  
decision of rejection]

[Date of extinction of right]

**\* NOTICES \***

**JPO and INPIT are not responsible for any damages caused by the use of this translation.**

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

---

**CLAIMS**

---

[Claim(s)]

[Claim 1] The management method of the phonecall charges constituted by means to specify the provisional limit about the tariff generated with a telecommunication message in the management method of the phonecall charges in a telecommunication network, and the means which indicates by present the telecommunication tariff which specifies the phase hand of the above-mentioned message and decides the above-mentioned message, and by which the above-mentioned message was accumulated in the above-mentioned telecommunication network.

[Claim 2] The approach according to claim 1 characterized by the calling party of the above-mentioned message receiving a charging indication before reaching, when the above-mentioned accumulation tariff becomes equal to the above-mentioned limit or it is exceeded.

[Claim 3] The approach according to claim 2 characterized by performing the display which a display receiving means becomes from reception of dial tone.

[Claim 4] The approach according to claim 2 characterized by the receiving means of the above-mentioned display consisting of audio reception.

[Claim 5] The approach according to claim 2 characterized by consisting of reception of data for the receiving means of the above-mentioned display to control a visual display.

[Claim 6] The approach according to claim 1 further constituted by means to cut the above-mentioned message when an accumulation telecommunication tariff becomes equal to the above-mentioned limit or it exceeds it.

[Claim 7] The approach according to claim 1 further constituted by means to memorize the classification information of the calling party of the above-mentioned message who specifies the handling of the message exceeding the above-mentioned limit.

[Claim 8] The approach according to claim 7 characterized by consisting of one or more individual check numbers for the above-mentioned classification information disregarding the above-mentioned limit.

[Claim 9] In the approach further constituted by means to maintain the present display of the accumulation telecommunication tariff to the message performed between specifying a provisional limit about the message performed at a fixed period, and a top Norikazu commuter's ticket The approach according to claim 1 characterized by consisting of reducing the above-mentioned limit to the above-mentioned balance when a means to specify a provisional limit exceeds with the inspection about whether the above-mentioned assignment limit exceeds the balance of the above-mentioned accumulation tariff in the above-mentioned period.

[Claim 10] The approach according to claim 1 characterized by to be constituted the assignment means of a provisional limit by the means which shows that they are not a means inspect whether it is a collect call and inspect whether it is a thing in case the result of the above-mentioned inspection is a collect call, a means specify the provisional above-mentioned limit from the above-mentioned called party, and the collect call that specifies the provisional limit from the above-mentioned calling party when it differs from the result of the above-mentioned inspection.

---

[Translation done.]

**\* NOTICES \***

**JPO and INPIT are not responsible for any damages caused by the use of this translation.**

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

---

**DETAILED DESCRIPTION**

---

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the approach and equipment with which a telephone calling party can improve management of his phonecall charges.

[0002]

[Description of the Prior Art] Generally, when telephone users talk over the telephone, the user is unknown about how change of the exact tariff generated by message, especially a tariff is related to a time. When a tariff is changed frequently, it is difficult to get to know about a tariff also by the past experience. The settlement-of-accounts service of a hotel in case there is the need of receiving a notice immediately about the tariff produced by message etc. is an exception so that a long distance call, an operator [ who expects that a calling party receives the notice of the phonecall charges after message termination ] auxiliary type message, or a hotel may carry out a visitor's fee calculation at the time of check-out. These services are special services to which a calling party has to pay a substantial tariff, and a calling party understands nothing about a tariff until too late time amount passes using the information for judging whether it is too late for carrying out some, namely, a message is continued about a tariff, or it ends, after a message is further completed except for a part of long distance call. In the direct dial type message which does not need operator assistance, a user gets to know the tariff about the message of reception specification for a monthly bill. In many cases, a user is surprised by the scale of phonecall charges also in which direction. For example, though it thinks that phonecall charges increase, a message is continued, or though it thinks that there are still few phonecall charges, the message is stopped early. Therefore, the problem of the conventional technique is that there is no economical equipment which enables management of the phonecall charges in the message or the day, week, or moon unit according to individual for a user.

[0003]

[Problem(s) to be Solved by the Invention] Although the progress which the above-mentioned problem is solved by an applicant's invention and exceeds the conventional technique by it is seen, a user can receive a notice in a user by the new function offered along with a telephone network or a telephone network, when assignment of the tariff limit which is easy to pay to a message is enabled beforehand or the appointed tariff frame is reached. Thereby, the user could manage the phonecall charges actually generated with a message, and the advantageous point has agreed to the volition of the user who pays an actual tariff.

[0004]

[Means for Solving the Problem] According to the desirable example, before performing a specific message, a user can receive the basic service which can pay about the message and can specify possible phonecall charges by dialing specific functional access numbers, such as \*46 (it being 1146 in the case of dial type telephone), following the display of the phonecall-charges amount of money which can accept the payment. Before the user under message receives the notice of a tariff and reaches a tariff limit with the visual display to a message, tone, a video telephone, or other display type telephones, he

can close a message (or automatically [ in one's volition ]), or he can recognize the surcharge of the message, or can cancel a limit setup as the phonecall charges generated according to a message approach a limit. Moreover, it is free to continue the tariff which a user may receive only a notice and is generated to a message. As an advantage, a user can control the phonecall charges generated about a specific message with sufficient correspondence by these configurations.

[0005] According to another description of this invention, a user can receive the service of a certain class explaining the specific function of a phonecall-charges control system. There are two or more individual check numbers which set up the individual check number for an upper limit frame and an upper limit frame being disregarded absolutely, or changing for a still higher limit, the limit over specific messages (900 messages etc.), and the respectively original limit in these functions. According to another mode of this invention, an accumulation limit can be set up to a certain kind of messages (900 messages etc.). The limit is the thing of a specific period (time amount and a day, or moon), and it is a thing on condition of the ability to ignore, when an individual check number (PIN) is used further. In changing, the approach of others which verify the approval of a calling party, for example, an audio check, can be used instead of PIN. Moreover, by using two or more individual check numbers as an advantage, the privilege of a teenager or the child not more than it can be limited, and a wide range privilege can be given to an adult at home.

[0006] According to another mode of this invention, a called party can prepare the above-mentioned configuration to the collect call which can specify a limit. As an advantage, since the addressee of a collect call cannot do the monitor of duration of a call, he escapes the burden of the superfluous tariff for the birthplace of a message being unknown.

[0007] Although phonecall charges can apply the above-mentioned configuration to the message of the class decided by the die length of a message, generally especially this configuration has phonecall charges effective in an international message far higher than domestic or a toll.

[0008]

[The mode of implementation of invention] Drawing 1 is a block diagram explaining actuation of this invention. The telephone 3, the "smart phone" (for example, two or more telephones, such as NorthernTelecom and the analog-display service interface (ADSI) telephone 5 made from Inc., are connected to class, such as SESS(trademark)2000 switch of AT & T Corp. of central office, 5 switch.) which used the conventional telephone 1 and a personal computer (PC) as the base Central office is controlled by the control program 12 built in above. There are customer data 11 for specifying the features about a customer connected to the classification switch in central office. There is a data source 14 which gives a data message to equipments, such as the digit receiver 15 with which the telephone 3 or the ADSI telephone 5, and customer of announcement MENTOSO-SU for giving cautions to the telephone users connected to the switch again, i.e., PC base, receive the data of the telephone number which carries out a key-in input, and others, in central office. Since it connects with the count information on the table according to office memorized by the incidental processor 17 or a switch (exchange) 10 obtains count data from the database 21 according to [ AIN ] office, it can access the advanced intelligent network (AIN) 20 classified by office. In the case of a long distance call, the central office 10 is connected by the interoffice trunk to the long-distance switch 30 for long-distance connection. the long distance which the long-distance switch 30 is connected to the long-distance count processor 31 which builds in a table, and has count data in a database 33 -- AIN32 can be accessed. Since the central office 10 obtains the count data with the accessible long-distance switch 30 to need, it can access the long-distance switch 30 through a data link.

[0009] Fundamentally, according to this invention, the volition which performs a message of that a customer hopes to dial an access code like \*46 and to manage phonecall charges is displayed. (When the calling party owns advanced telephone, the same result can be obtained by the specific key or specific actuation.) According to the desirable example, a switch 10 answers by the tone following the message "put in a phonecall-charges limit in U.S. dollar." Next, a calling party pays a tariff and dials a called party's number (before a customer hears notes and dials a phonecall-charges limit on the other hand, a called party number can be dialed). In order to refer for a switch to the table in the count processor 17 or

to acquire count information, a message is sent to the long-distance switch 30 through a data link. After a message is materialized, a switch 10 tells a calling party about warning of the time amount in connection with a limit tariff having passed according to the service (or it having set automatically) option with which it acted as the monitor of the accumulation tariff relevant to the die length and this die length of a message, and the calling party side chose it (about the telephone 3 or the ETSI telephone 5 of PC base, a data message can be displayed on a calling party delivery and for called parties). According to an alarm signal sound or a data message, a calling party completes a message and a calling party inputs the additional data which closes a message or wishes to extend.

[0010] Drawing 2 shows actuation of this invention in case a calling party's telephone is connected to the private office exchange (PBX) 200. When the customer circuit record 211, the table 219, and the count processor of arbitration are used for this PBX, the table of that count processor and circuit record are included. Furthermore, PBX can access the database in AIN20. PBX is connected to a dial-up line network through a PBX trunk line. A trunk line can be ended also in any of classification central office or the long-distance switch 30. it is not what customer circuit record and management of a table are performed by the system administrator of PBX, and is depended on management of the telephone company -- removing -- basic actuation in the PBX environment -- the above -- either is the same.

[0011] Drawing 3 explains the option which a customer can use about this kind of service. Option information is memorized with the classification information on others which are contained in the conversion information about each customer who is some of station databases or station databases. In this explanation example, a default option is prepared to all customers and special conversion information is not needed. When there is no specific conversion information about a calling party customer, a switch side uses a default option. The default option in the case of being general is based on the parameter memorized about the switch. In a specific desirable example, the default option is as follows. When a calling party inputs an activation code (for example, \*46), a calling party receives the cautions message about the dollar amount of money, and inputs this dollar amount of money. Although it changes with classes of telephone which a calling party uses, audible or visual notes is sent before the setup time which reaches a customer's assignment limit (for example, 10 seconds before). Actuation beyond it cannot be performed but a customer can make selection which disregards notes and continues conversation.

[0012] It is necessary to memorize the conversion information about a customer, therefore, in the case of the subscriber service of level 1, service order is needed. In service order, a customer specifies increment with the need that a subscriber receives the notice about a tariff. A customer receives a notice through the whole message, whenever each increment passes. The die length of a message is not restricted automatically.

[0013] In the case of the subscriber service of level 2, with a telecommunication circuit network, it is automatically careful about a limit to a customer. Although this cautions warning is the form of a message while it begins, it may become specific tone after it. A number is dialed for the cautions about a subscriber limit, and another configuration which shows that the desirable example explained below specifies a tariff limit before a calling party dials a number, however is made desirable in the case of the subscriber service of level 2 is offered after recognizing that a switch is a long distance call.

Corresponding to cautions, a subscriber only displays the thing which should input a limit or should apply a service to this message and out of which it does not come (carrying out the key in of #). It is that, as for another available option, the default limit is specified about all long distance calls with proper conversion information. There is an option about whether only cautions of approaching the option about the limit per [ which was beforehand specified as the service of level 1 ] message and the tariff limit are given, or cautions are given, and a message is closed or give cautions and a new limit is made to input among the options to this service.

[0014] In the case of the subscriber service of level 3, the same option as level 2 can be used and cautions are given [ that a telecommunication circuit network inputs an individual check number (PIN) to a subscriber, and ] further. In service order, a customer can set up the option of which a calling party can cancel the day of the phonecall charges generated about each PIN, a week, and a monthly limit and

the limit relevant to a specific PIN number. The service accepts the option which disregards a limit, when phonecall charges are imposed on a credit number before reaching an PIN number and a limit with the option of which the day which notifies when a limit is reached, and/or is ended, a week and a monthly accumulation use limit, and a limit are canceled, the option to two or more PIN, and a different privilege relevant to each limit. A credit call can be added to the cumulative total frame accumulated as a subscriber option, or it cannot do. When it is the service of the format for which a customer wishes as a specific case about a specific message, level 1 and the customer of 2 and 3 can use a default option. [0015] In the case of an emergency call like a No. 911 call, a limit can always be exceeded. a process required for drawing 4 A and drawing 4 B to start a service to a specific message, and input proper data is shown -- it flows and comes out. The action block 401 is shown when off-hook is carried out, in order that a user may talk a calling party burden over the telephone. In the message without a calling party burden like the conventional No. 800 call, a calling party does not need to restrict a tariff. A test 403 judges whether the user dialed \*46 and started function code. When having not started, standard message processing is performed (action block 405). The function explained to drawing 9 which restricts a customer's total tariff amount is included in standard message processing. An input of starting function code judges whether the service of a class is specially on a circuit using a test 407. When there is nothing, a standard default option is performed (action block 409), and the test 421 explained below is inputted. When the calling party has received the service of the specific class which shows the special function to the use which restricts phonecall charges, a test 411 is inputted and the first individual check number (PIN) judges whether it is the need. When not required, the test 421 of the class which an option mentions later specially is supplied directly. When PIN is required, voice cautions (to telephone like telephones 3 or 5, they are visual cautions to telephones, such as a telephone 1) are supplied to a calling party (action block 415), and a user inputs PIN corresponding to it (action block 417). It judges whether PIN is effective using a test 419, and when not effective, a user receives [ inputting PIN again by the trial of the count of limitation and ] cautions. When a cord is effective, in order to input a test 421 and to require assignment of the dollar amount of money of a customer, it judges any shall be performed between voice cautions or visual cautions. When visual cautions are required, a visual message is sent (action block 427) and the action block 425 is inputted. When voice cautions are required, a sound signal sound and/or voice warning are performed to a customer, and it is required that a dollar limit should be inputted. In the action block 425, a user inputs the dollar limit to a message following the delimiter of "#" or others. As for a test 429, a user judges whether the zero amount of money of a dollar was inputted. If it has inputted, the action block 431 will require that the 2nd cautions should be given, and a user should reinput a limit, or a limit demand should be canceled. A test 433 confirms whether the user is demanding reinput of a limit. If it is demanding, the action block 425 will be reinputted. If it is not demanding, standard message processing (action block 405) is performed. The count of reinput can be restricted to 2 times. Drawing 5 is inputted into a test 501 when a user does not input the zero amount of money.

[0016] A test 501 checks the user limit to a customer record parameter. When there is less user limit than a customer record parameter, a user receives the settled voice or the visual inspection information on a dollar limit (action block 503). When a user exceeds the limit of assignment with a user parameter, as for the customer, the amount of money is over the limit, and the voice-told message of the allowable maximum amount being prepared is received (action block 505). A test 507 judges whether a limit can be disregarded by PIN to which a user corresponds. When it cannot ignore, the action block 425 is inputted and a user can specify a limit separately. When a user has excess capacity, a user inputs PIN (action block 509) and judges whether the test 511 of PIN is effective. When not effective, a user waits for another opportunity and inputs PIN through the action block 509. When PIN is effective, a user gets the settled voice of a dollar limit or visual inspection (action block 503). A test 601 ( drawing 6 ) is inputted following the action block 503.

[0017] It judges whether the test 601 is over the day, week, or monthly use limit specified to customer record. When having not exceeded, the test 701 ( drawing 7 ) explained below is inputted. When it is over Japanese another limit, voice or a visual message is sent to a calling party. It is shown that voice or



a visual message is over Japanese another use limit (action block 603). A test 605 is inputted and a message judges whether they are a credit card or a collect call. When it is not any of a credit card or a collect call, either, it judges whether a calling party has the override (disregard capacity) of a day, a week, or a monthly limit using a test 611. A message is closed when it does not have disregard capacity (action block 607). When the calling party has disregard capacity, a calling party receives cautions about exaggerated RAIDOKO-DO (action block 613). A test 615 judges whether right exaggerated RAIDOKO-DO was received. A message is closed when message processing is continued when exaggerated RAIDOKO-DO is received (the action block 700, drawing 7), and not received (action block 607).

[0018] However, when a message is a credit card or a collect call, it is necessary to input a credit card number or to ask for operator assistance (action block 609), and the messages including the limit specified as the message are processed normally after that (the action block 700, drawing 7). Although the calling party of a credit call or a collect call message has the case where he wants to receive the display of whether to be over the specific regulation charge, even if the limit specified as customer record is disregarded, the selection which talks over the telephone anyhow may be attained. Of course, in the case of a collect call, a called party is not stingy although the limit specified to the calling party is exceeded.

[0019] As shown above, when it is not over the limit to a message, the action block 700 is inputted. The action block 700 shows that a called party number is specified by [ which a calling party dials using the usual telephone 1, or carries out a key in using one of the other telephones 3 and 5 ] carrying out. A test 702 judges whether it is the emergency call of specification [ a message ], and a limit is simply canceled to an emergency call in that case. It judges whether a test 703 can be materialized in a message. A message is closed when a message must have been formed (action block 704). When a message is materialized, a message advances and the action block 705 is inputted. It judges whether a test 709 is ended before a message reaches a limit. When ending, the test 801 of drawing 8 is inputted. When not ending, it judges whether the present count limit was reached using a test 711. Moreover, when not ending, the phonological representation of a tariff or the visual display which generated the calling party until now is given periodically (action block 713). When the present count limit is reached, it judges whether a test 715 is inputted and the service parameter needs termination of a message. When you need, the test 801 of drawing 8 mentioned later is inputted. When a service parameter reaches a limit and it is being directed that there is no need of closing a message, a calling party judges whether the notice of being over a limit was received (action block 717), he inputted the test 719, and the calling party wishes formation of a new limit. Moreover, when you need, the block 425 of drawing 4 B is reinputted and a customer enables it to set up an additional dollar limit. When the calling party does not wish formation of a new limit, the test block 801 of drawing 8 is inputted.

[0020] A test 801 judges whether the calling party supplies push, PC, or the signal equivalent from an ADSI telephone for the switch hook ("flash plate"). When that is not right, a message is only closed (action block 803), and debit entry (addition) of a calling party's account is carried out, or count record is broken. Debit entry of an account is performed when the specific account is being explained to the telephone rate which the customer generated. If this account becomes zero, it cannot talk over the telephone until payment is performed to an account (when a calling party performs a flash plate, as a result of a test's 801 being trustworthy), but the central office 10 will supply the time amount about that message and the voice of a tariff, or a visual display to a customer. Then, a message is closed (action block 803).

[0021] The block 901 of drawing 9 is inputted from the block 405 of drawing 4 A. In this case, the calling party is not dialing \*46. When a calling party has the notice function of count information of an active state, the block 701 of drawing 7 is inputted without a calling party receiving a limit of the tariff generated with a message so that the notice about a message can be received. When the notice function of count is not active, customer service record is checked about offer of the parameter in the case of displaying the whole limit, the count of a message, an accumulation tariff, and cautions warning etc. (action block 903). It memorizes in order to use these parameters with the treatment taken after that to

the message and the action block 701, and a test 701 ( drawing 7 ) is inputted.

[0022] Drawing 10 shows the special treatment performed about a collect call. It judges whether a called party receives a message call using a test (action block 1001) 1003 following the dial input of a collect call, and a message is stopped when not winning popularity. a \*\*\*\*\* [ that a called party has a notice function of count using a test 1007 when a called party accepts a message call ] -- or it judges whether he wishes the call of a function by inputting function code like \*22 (it being 1122 in the case of a dial phone). When the called party does not have this function, a test 405 (drawing 4 A) is inputted and a called party has the opportunity to require tariff limitation.

[0023] When the appointed tariff limit is approached, the idea which gives a calling party cautions can be used also for a credit call, an individual message, or other messages, and when a limit is approached, as the collect call explained, a calling party only specifies a tariff limit and receives cautions.

[0024] It cannot be overemphasized that the above-mentioned explanation is only one of the desirable examples of this invention. This contractor can devise a countless configuration, without deviating from the range of this invention. This invention is limited by the definition of an attendant claim.

---

[Translation done.]

\* NOTICES \*

JPO and INPIT are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

---

TECHNICAL FIELD

---

[Field of the Invention] This invention relates to the approach and equipment with which a telephone calling party can improve management of his phonecall charges.  
[0002]

---

[Translation done.]

\* NOTICES \*

**JPO and INPIT are not responsible for any damages caused by the use of this translation.**

1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

PRIOR ART

---

[Description of the Prior Art] Generally, when telephone users talk over the telephone, the user is unknown about how change of the exact tariff generated by message, especially a tariff is related to a time. When a tariff is changed frequently, it is difficult to get to know about a tariff also by the past experience. The settlement-of-accounts service of a hotel in case there is the need of receiving a notice immediately about the tariff produced by message etc. is an exception so that a long distance call, an operator [ who expects that a calling party receives the notice of the phonecall charges after message termination ] auxiliary type message, or a hotel may carry out a visitor's fee calculation at the time of check-out. These services are special services to which a calling party has to pay a substantial tariff, and a calling party understands nothing about a tariff until too late time amount passes using the information for judging whether it is too late for carrying out some, namely, a message is continued about a tariff, or it ends, after a message is further completed except for a part of long distance call. In the direct dial type message which does not need operator assistance, a user gets to know the tariff about the message of reception specification for a monthly bill. In many cases, a user is surprised by the scale of phonecall charges also in which direction. For example, though it thinks that phonecall charges increase, a message is continued, or though it thinks that there are still few phonecall charges, the message is stopped early. Therefore, the problem of the conventional technique is that there is no economical equipment which enables management of the phonecall charges in the message or the day, week, or moon unit according to individual for a user.

---

[Translation done.]

**\* NOTICES \***

**JPO and INPIT are not responsible for any damages caused by the use of this translation.**

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

---

**TECHNICAL PROBLEM**

---

[Problem(s) to be Solved by the Invention] Although the progress which the above-mentioned problem is solved by an applicant's invention and exceeds the conventional technique by it is seen, a user can receive a notice in a user by the new function offered along with a telephone network or a telephone network, when assignment of the tariff limit which is easy to pay to a message is enabled beforehand or the appointed tariff frame is reached. Thereby, the user could manage the phonecall charges actually generated with a message, and the advantageous point has agreed to the volition of the user who pays an actual tariff.

---

[Translation done.]

**\* NOTICES \***

**JPO and INPIT are not responsible for any damages caused by the use of this translation.**

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

---

**MEANS**

---

[Means for Solving the Problem] According to the desirable example, before performing a specific message, a user can receive the basic service which can pay about the message and can specify possible phonecall charges by dialing specific functional access numbers, such as \*46 (it being 1146 in the case of dial type telephone), following the display of the phonecall-charges amount of money which can accept the payment. Before the user under message receives the notice of a tariff and reaches a tariff limit with the visual display to a message, tone, a video telephone, or other display type telephones, he can close a message (or automatically [ in one's volition ]), or he can recognize the surcharge of the message, or can cancel a limit setup as the phonecall charges generated according to a message approach a limit. Moreover, it is free to continue the tariff which a user may receive only a notice and is generated to a message. As an advantage, a user can control the phonecall charges generated about a specific message with sufficient correspondence by these configurations.

[0005] According to another description of this invention, a user can receive the service of a certain class explaining the specific function of a phonecall-charges control system. There are two or more individual check numbers which set up the individual check number for an upper limit frame and an upper limit frame being disregarded absolutely, or changing for a still higher limit, the limit over specific messages (900 messages etc.), and the respectively original limit in these functions. According to another mode of this invention, an accumulation limit can be set up to a certain kind of messages (900 messages etc.). The limit is the thing of a specific period (time amount and a day, or moon), and it is a thing on condition of the ability to ignore, when an individual check number (PIN) is used further. In changing, the approach of others which verify the approval of a calling party, for example, an audio check, can be used instead of PIN. Moreover, by using two or more individual check numbers as an advantage, the privilege of a teenager or the child not more than it can be limited, and a wide range privilege can be given to an adult at home.

[0006] According to another mode of this invention, a called party can prepare the above-mentioned configuration to the collect call which can specify a limit. As an advantage, since the addressee of a collect call cannot do the monitor of duration of a call, he escapes the burden of the superfluous tariff for the birthplace of a message being unknown.

[0007] Although phonecall charges can apply the above-mentioned configuration to the message of the class decided by the die length of a message, generally especially this configuration has phonecall charges effective in an international message far higher than domestic or a toll.

[0008]

[The mode of implementation of invention] Drawing 1 is a block diagram explaining actuation of this invention. The telephone 3, the "smart phone" (for example, two or more telephones, such as NorthernTelecom and the analog-display service interface (ADSI) telephone 5 made from Inc., are connected to class, such as SESS(trademark)2000 switch of AT & T Corp. of central office, 5 switch.) which used the conventional telephone 1 and a personal computer (PC) as the base Central office is controlled by the control program 12 built in above. There are customer data 11 for specifying the features about a customer connected to the classification switch in central office. There is a data source

14 which gives a data message to equipments, such as the digit receiver 15 with which the telephone 3 or the ADSI telephone 5, and customer of announcement MENTOSO-SU for giving cautions to the telephone users connected to the switch again, i.e., PC base, receive the data of the telephone number which carries out a key-in input, and others, in central office. Since it connects with the count information on the table according to office memorized by the incidental processor 17 or a switch (exchange) 10 obtains count data from the database 21 according to [ AIN ] office, it can access the advanced intelligent network (AIN) 20 classified by office. In the case of a long distance call, the central office 10 is connected by the interoffice trunk to the long-distance switch 30 for long-distance connection. the long distance which the long-distance switch 30 is connected to the long-distance count processor 31 which builds in a table, and has count data in a database 33 -- AIN32 can be accessed. Since the central office 10 obtains the count data with the accessible long-distance switch 30 to need, it can access the long-distance switch 30 through a data link.

[0009] Fundamentally, according to this invention, the volition which performs a message of that a customer hopes to dial an access code like \*46 and to manage phonecall charges is displayed. (When the calling party owns advanced telephone, the same result can be obtained by the specific key or specific actuation.) According to the desirable example, a switch 10 answers by the tone following the message "put in a phonecall-charges limit in U.S. dollar." Next, a calling party pays a tariff and dials a called party's number (before a customer hears notes and dials a phonecall-charges limit on the other hand, a called party number can be dialed). In order to refer for a switch to the table in the count processor 17 or to acquire count information, a message is sent to the long-distance switch 30 through a data link. After a message is materialized, a switch 10 tells a calling party about warning of the time amount in connection with a limit tariff having passed according to the service (or it having set automatically) option with which it acted as the monitor of the accumulation tariff relevant to the die length and this die length of a message, and the calling party side chose it (about the telephone 3 or the ETSI telephone 5 of PC base, a data message can be displayed on a calling party delivery and for called parties). According to an alarm signal sound or a data message, a calling party completes a message and a calling party inputs the additional data which closes a message or wishes to extend.

[0010] Drawing 2 shows actuation of this invention in case a calling party's telephone is connected to the private office exchange (PBX) 200. When the customer circuit record 211, the table 219, and the count processor of arbitration are used for this PBX, the table of that count processor and circuit record are included. Furthermore, PBX can access the database in AIN20. PBX is connected to a dial-up line network through a PBX trunk line. A trunk line can be ended also in any of classification central office or the long-distance switch 30.

\* NOTICES \*

JPO and INPIT are not responsible for any damages caused by the use of this translation.

- 1.This document has been translated by computer. So the translation may not reflect the original precisely.
- 2.\*\*\*\* shows the word which can not be translated.
- 3.In the drawings, any words are not translated.

---

DESCRIPTION OF DRAWINGS

---

[Brief Description of the Drawings]

[Drawing 1] The block diagram of the system for realizing this invention in the context of a public telephone network.

[Drawing 2] It is a configuration for realizing this invention in a private office switched network.

[Drawing 3] The layout of the data to a customer [ hoping to give flexibility to management of the tariff about a message ].

[Drawing 4 A] 1 of the flow chart for realizing this invention.

[Drawing 4 B] 2 of the flow chart for realizing this invention.

[Drawing 5] The flow chart for realizing this invention.

[Drawing 6] The flow chart for realizing this invention.

[Drawing 7] The flow chart for realizing this invention.

[Drawing 8] The flow chart for realizing this invention.

[Drawing 9] The flow chart for realizing this invention.

[Drawing 10] The flow chart for realizing this invention.

[Description of Notations]

1 Telephone

3 Smart Phone

5 ADSI Telephone

10 Switch

20 AIN

30 Long-Distance Switch

---

[Translation done.]



**\* NOTICES \***

**JPO and INPIT are not responsible for any damages caused by the use of this translation.**

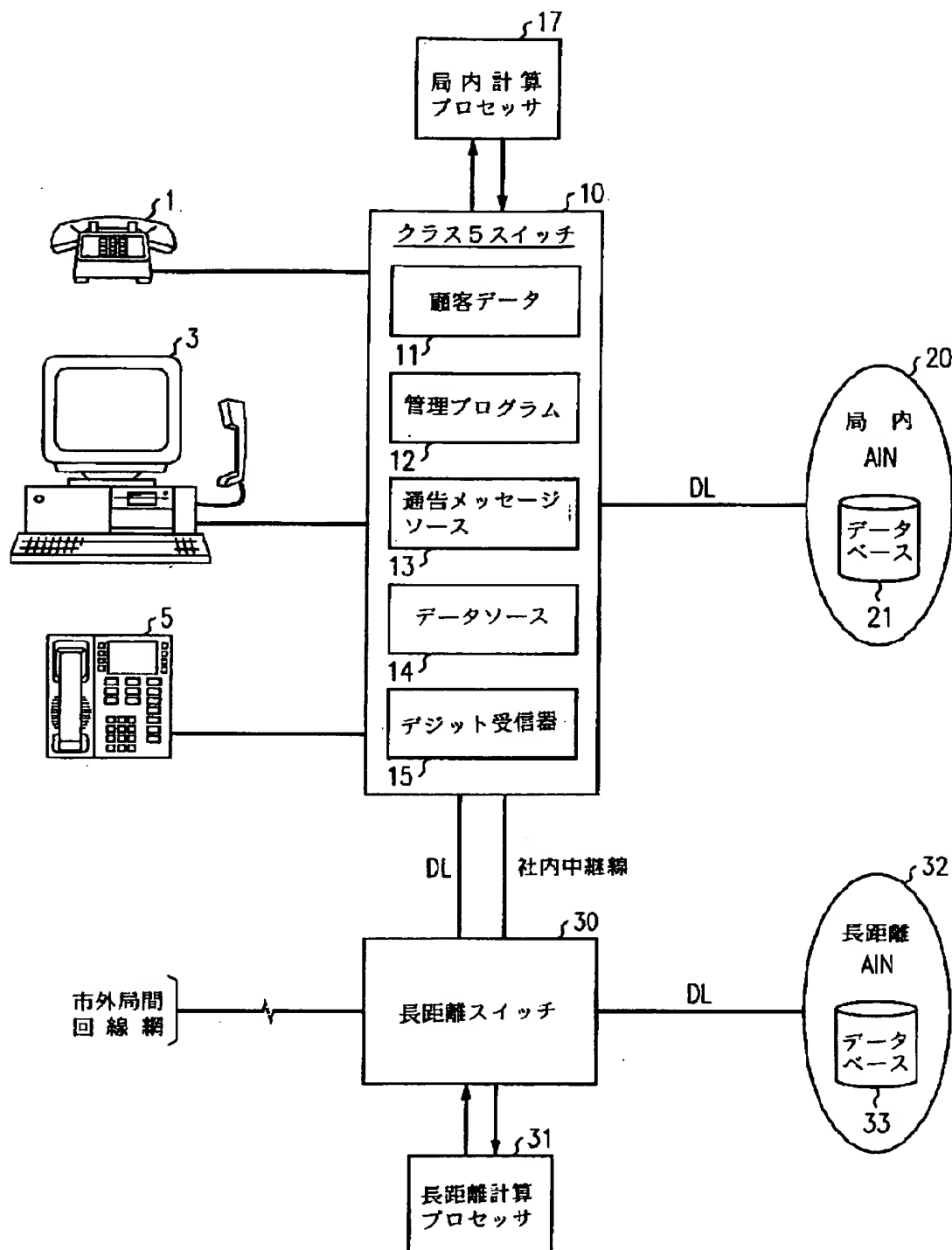
1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

---

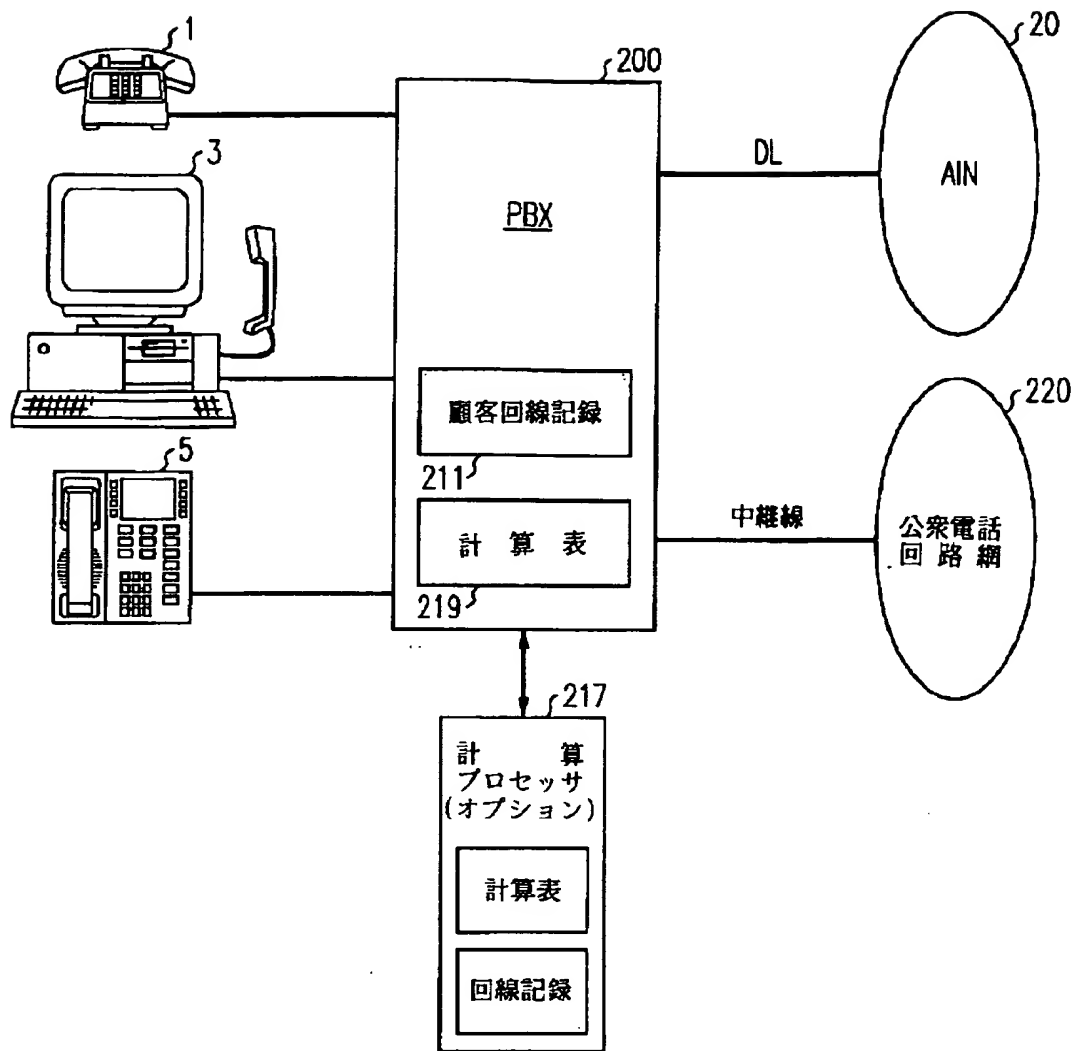
**DRAWINGS**

---

[Drawing 1]



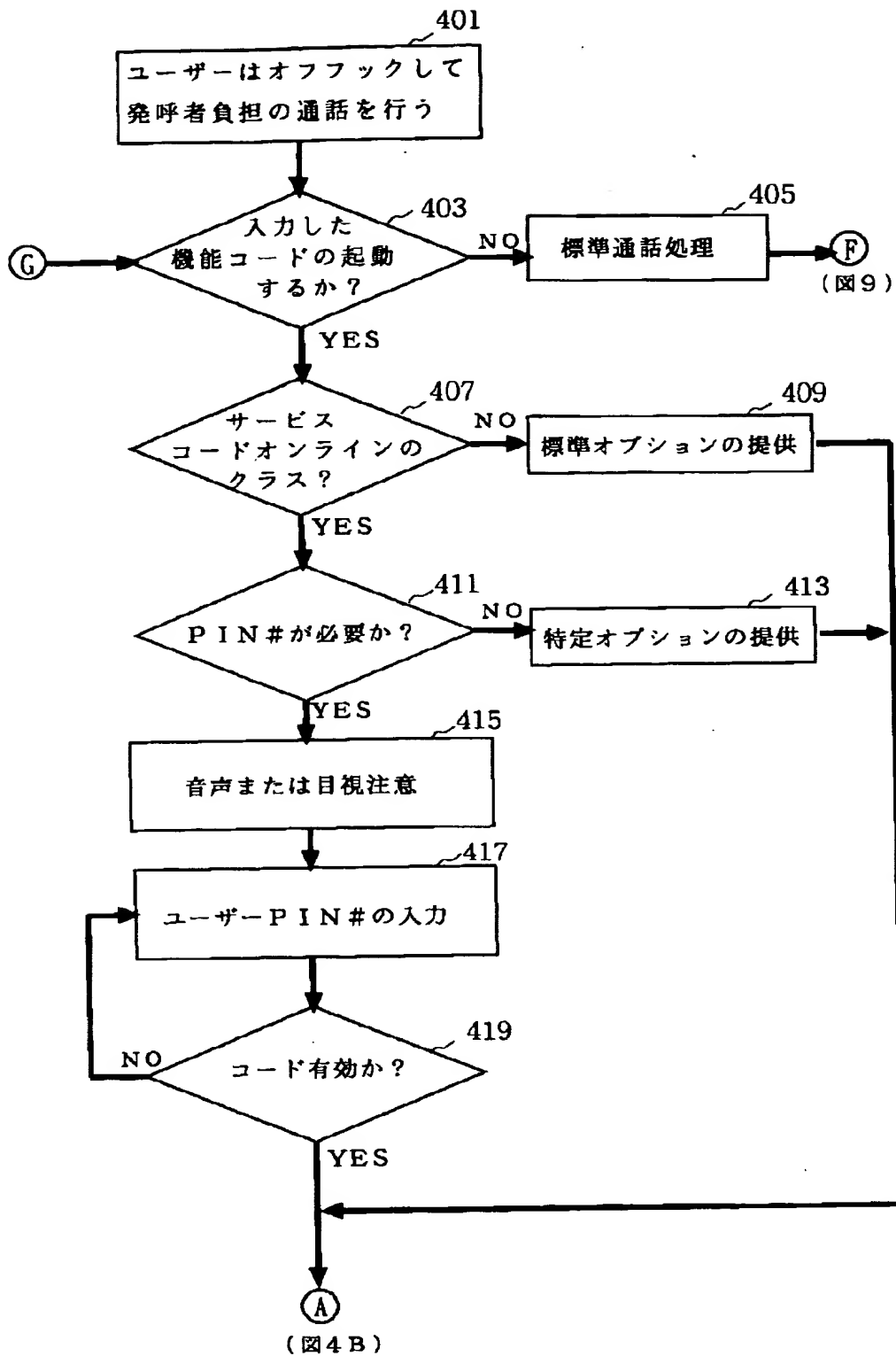
[Drawing 2]



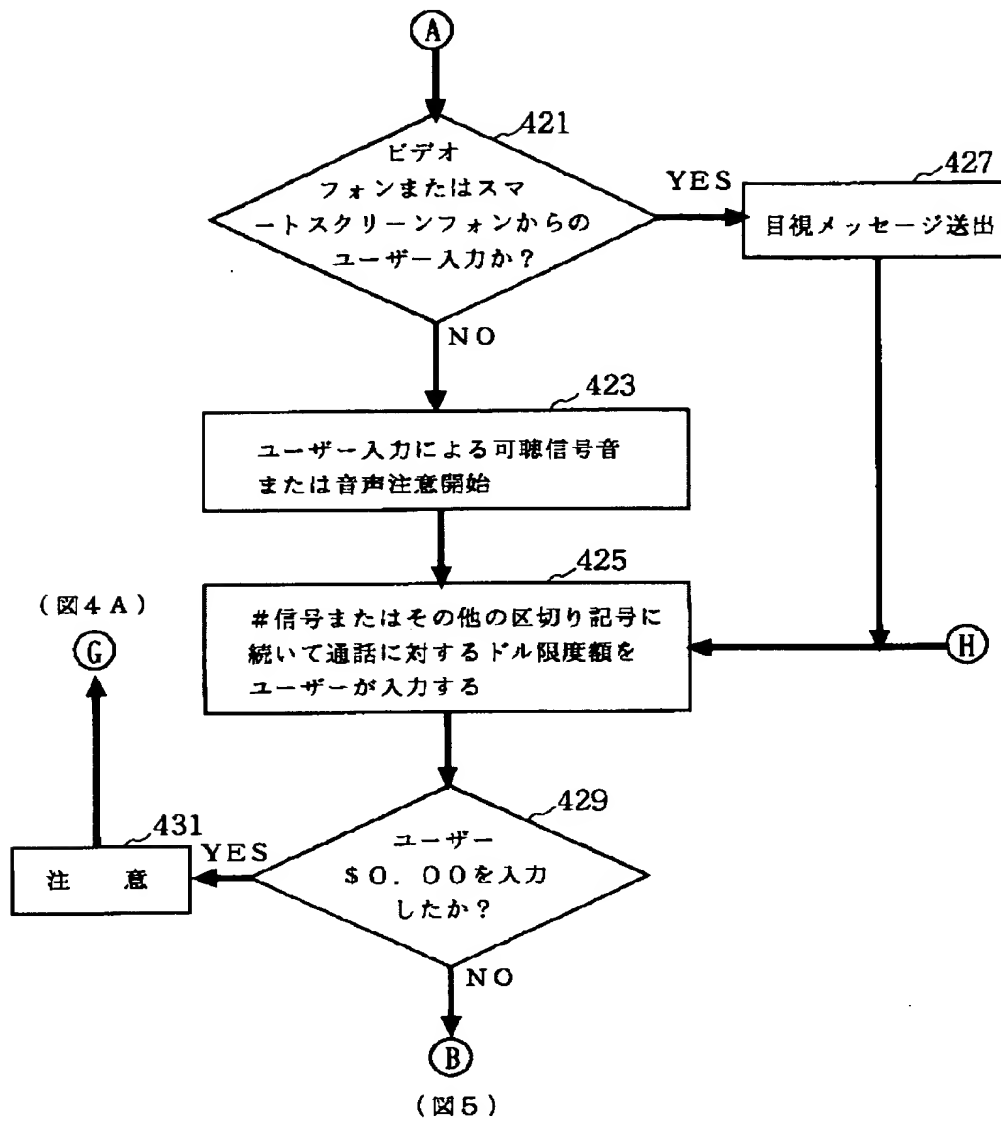
[Drawing 3]

ケース	処 置	必要とするサービスオーダー	オ プ シ ョ ン
デフォルト (スイッチパラメータにもとづくもの： すべてのユーザーは スイッチによるサービスを受ける)	ドル限度額についての注意に続いて発呼者が起動コード（例えば*46）を入力する。 ユーザーはドル金額を入力する。	なし	限度額に達したとユーザーが判断する前に音声／目視注意を設定時間に与える、その後の処置はなし
レベル1加入者サービス	加入者サービスオーダーを要す	あり 加入者設定増加分についての使用注意、注意のみ	顧客プロフィールに基づくドル増加分をユーザーが判断した時点で音声／目視注意（例えば、100ドル毎に注意、制限なし）
レベル2加入者サービス	加入者限度額に対する自動回線網注意、限度額入力かまたはサービスオフ、限度額取扱い選択またはデフォルトについての注意	あり	レベル1および通話 当り限度額 1)ユーザーによる限度額入力時のみ注意 2)注意および終了 3)注意、新規限度額入力
レベル3加入者サービス (レベル3には、レベル3のオプションの他にレベル2に説明するオプションを含む)	回線網注意：PIN#	注意および処置オプション あり 日、週および月別限度額をPIN#に割当てのサービスオーダー記録に設定、PIN#関連の限度額を解除する能力	サービスにより以下のものが可能となる 1)限度額到達時に日、週、月別累積使用限度額（チェックまたはモニターしたもの）についてメッセージまたは終了 2)限度額解除 3)複数のPIN# 4)クレジット#に振当ての通話（聴取に含まれる/含まれない）

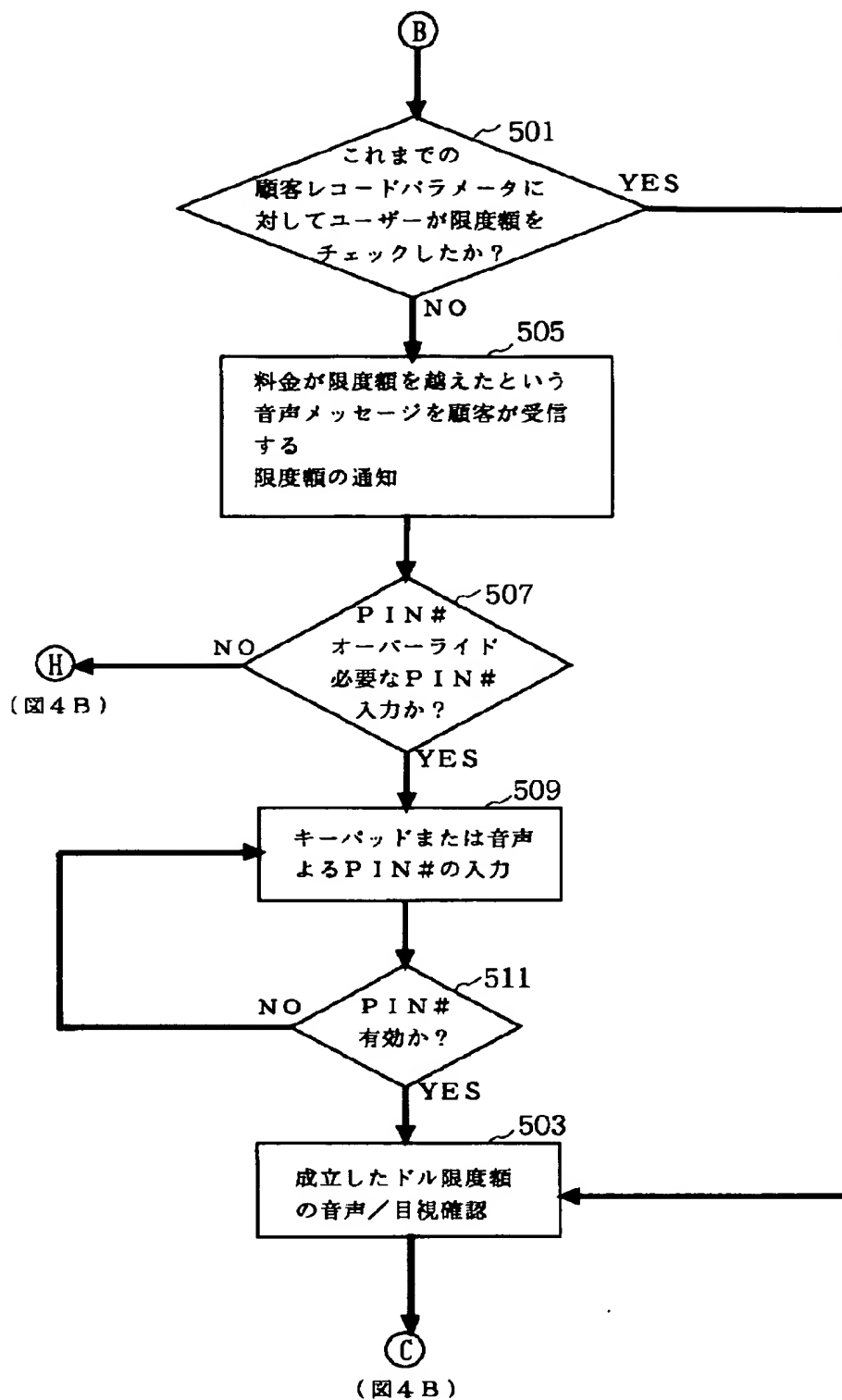
[Drawing 4 A]



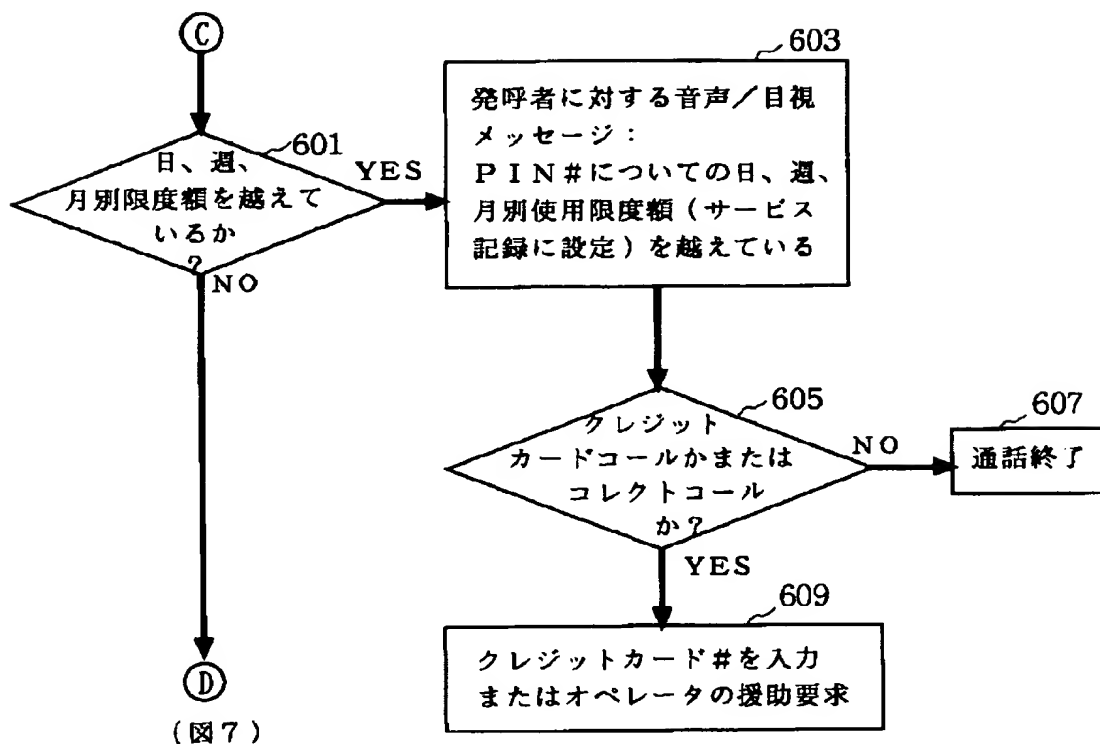
[Drawing 4 B]



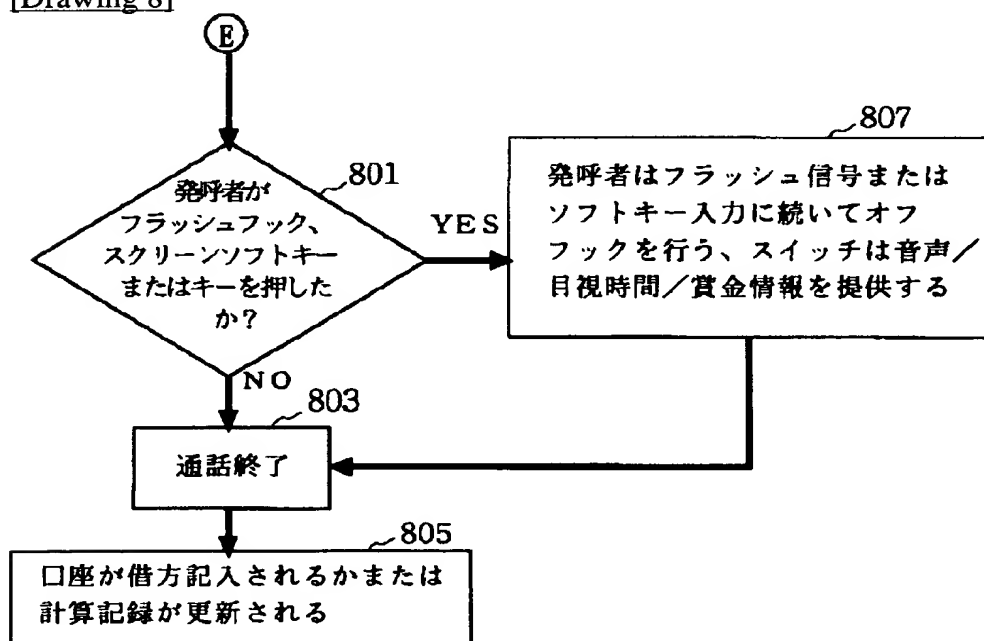
[Drawing 5]



[Drawing 6]

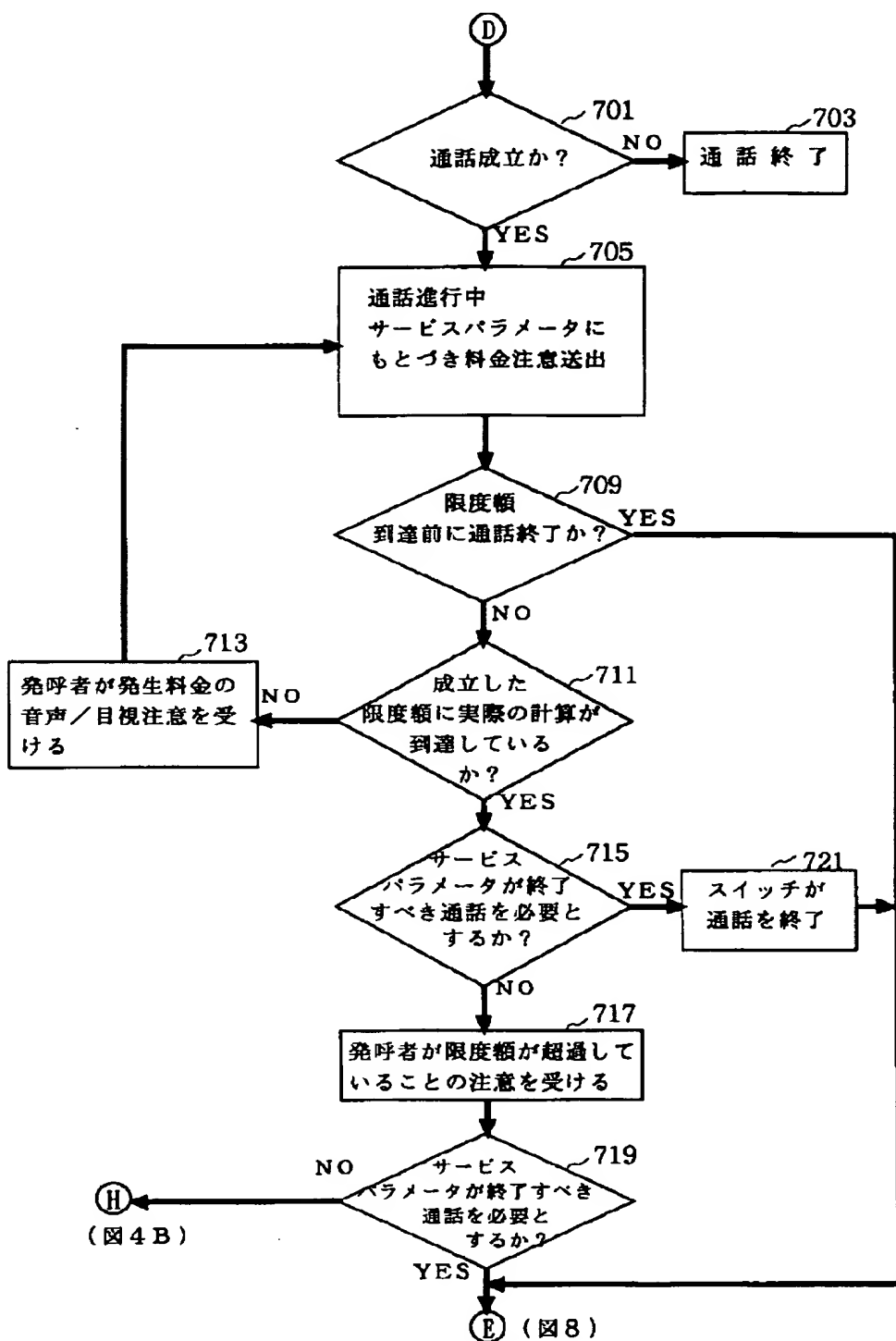


[Drawing 8]

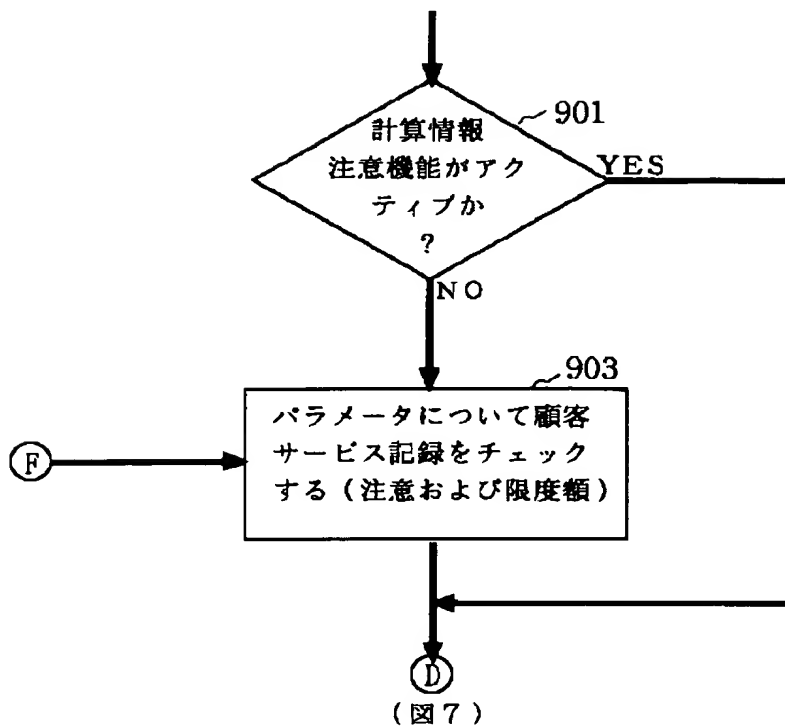


[Drawing 7]

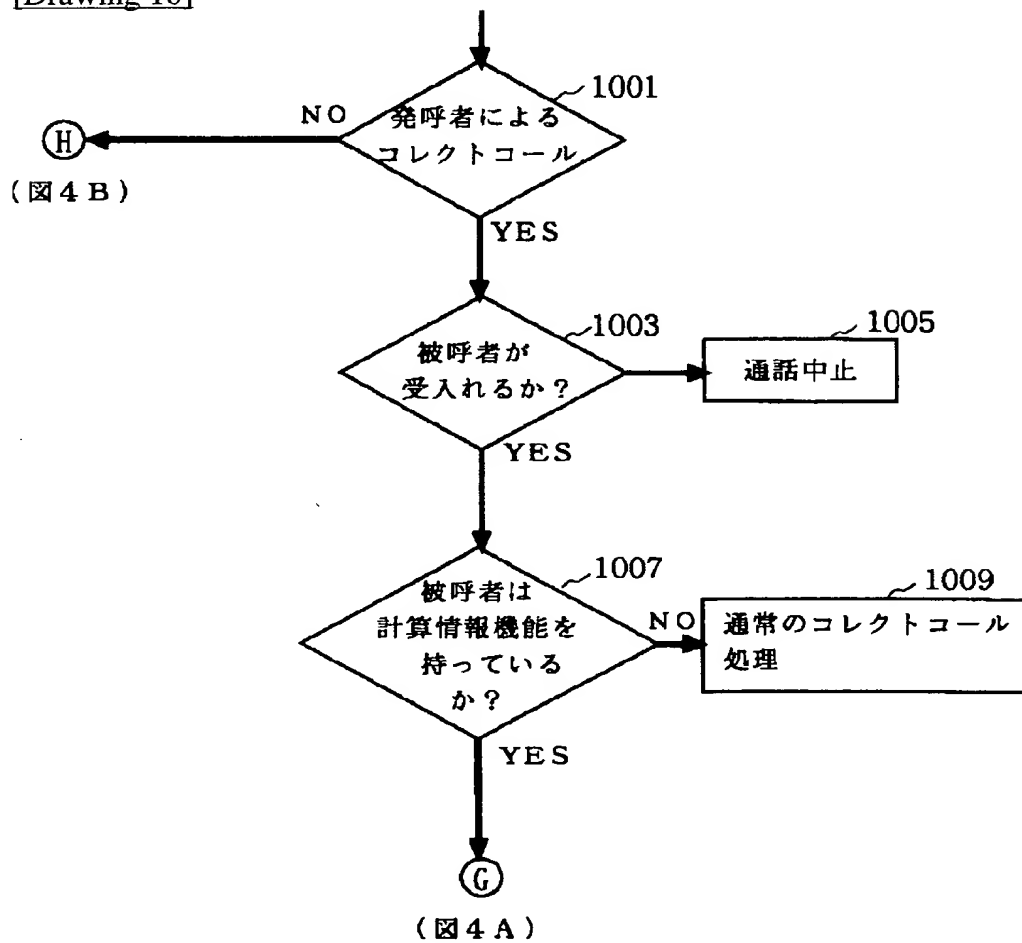




[Drawing 9]



[Drawing 10]



---

[Translation done.]